

CLAIMS

1. A delivery device for a medicament comprising:
a housing,
5 a receptacle holding a medicament in the form of a powder; and
a source of propellant,
characterized in that the housing provides an inlet and an outlet for the
receptacle wherein the inlet is in fluid communication with the source of
propellant and is directed against the medicament and the outlet is spaced
10 from the medicament to allow aerosolisation of the medicament.
2. A device according to claim 1 wherein the receptacle is removable
from the housing.
- 15 3. A device according to claim 1 or claim 2 wherein the source of
propellant is removable from the housing.
4. A device according to any one of the preceding claims wherein the
fluid communication between the inlet and the source of propellant is
20 provided by a propellant pathway which has at least one propellant
pathway choke to decelerate the propellant.
5. A device according to claim 4 wherein the propellant pathway
choke is in the form of a constriction or a baffle.
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6. A device according to any one of the preceding claims wherein the
inlet has an end which is directed against the medicament which is in the
form of a flared tube or of a shower-head.
- 30 7. A device according to any one of the preceding claims wherein the
inlet is in the form of an inlet tube.

8. A device according to claim 7 wherein the tube extends into the receptacle.
9. A device according to claim 7 or claim 8 wherein the tube is provided with one or more perforations.
10. A device according to any one of the preceding claims wherein the receptacle has a bottom containing the medicament and a top which connects to the housing and the outlet is arranged to open into the receptacle at the top of the receptacle.
11. A device according to claim 10 wherein the outlet opens into the receptacle at one end of the outlet which is substantially flush with the top end of the receptacle.
12. A device according to any one of the preceding claims wherein the outlet does not extend into the receptacle.
13. A device according to any one of the preceding claims wherein the outlet is formed as a hole in the housing which is in fluid communication with an outlet pathway in the housing which connects to the exterior of the housing.
14. A device according to any one of the preceding claims wherein a stable aerosol of the medicament is formed upon activation of the device.
15. A device according to claim 14 which has a normally sealed outlet.
16. A device according to any one of claims 1 to 13 wherein the outlet is in fluid communication with an outlet pathway which connects to the exterior of the device wherein the outlet pathway is provided with one or more outlet pathway chokes for decelerating the aerosol of the

medicament

17. A device according to claim 16 wherein the one or more outlet pathway chokes are one or more constrictions and/or one or more baffles.

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18. A device according to any one of the preceding claims which is provided with a mouthpiece attached to the outlet.

19. A device according to any one of claims 1 to 17 wherein the outlet
10 is provided with a tube for engaging with a breathing tube for a patient using a respirator.

20. A device according to any one of the preceding claims which is a handheld device.

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21. A device according to any one of the preceding claims wherein the source of propellant is provided by a canister of gas.

22. A device according to claim 21 wherein the canister has a valve
20 and the device is arranged such that in use the valve is above the canister.

23. A device according to any one of the preceding claims wherein the receptacle is in the form of an open-ended compartment and an optionally removable blister pack.

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24. A housing for a delivery device for a medicament having a first and a second open-ended compartment wherein the first compartment is adapted to receive a source of propellant and the second compartment is adapted to receive a receptacle containing a medicament in powder form
30 wherein the second compartment provides an inlet for propellant in fluid communication with the first compartment and an outlet wherein the outlet, in use, is spaced from the medicament to allow aerosolisation of

the medicament.

25. A housing according to claim 24 having one or more features as defined in any one of claims 4 to 20.

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26. A kit comprising a canister of propellant, a receptacle containing a medicament in powder form and a delivery device housing as defined in claim 24 or 25.

10 27. A kit according to claim 26 which comprises a plurality of receptacles.

28. A kit according to claim 26 or claim 27 wherein the receptacle and source of propellant are provided in the form of combined supply for the
15 first delivery device housing such that the receptacle and source of propellant are linked for combined insertion into the housing.

29. A dispensing receptacle comprising a receptacle unit containing a medicament in powder form which receptacle is in fluid tight engagement
20 with a header unit wherein the header unit provides the receptacle with an inlet for propellant and an outlet wherein the outlet is spaced from the medicament to allow aerosolisation of the medicament in use and wherein the header unit has a propellant entry connector in fluid communication with the inlet for propellant.

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30. A receptacle according to claim 29 wherein the inlet has an end which is directed against the medicament which is in the form of a flared tube or of a shower-head.

30 31. A receptacle according to claim 29 or claim 30 wherein the inlet is in the form of an inlet tube.

32. A receptacle according to claim 31 wherein the tube extends into the receptacle unit.

5 33. A receptacle according to claim 31 or claim 32 wherein the tube is provided with one or more perforations.

34. A receptacle according to any one of claims 29 to 33 wherein the receptacle unit has a bottom containing the medicament and a top which
10 connects to the housing and the outlet is arranged to open into the receptacle unit at the top of the receptacle unit.

35. A receptacle according to claim 34 wherein the outlet opens into the receptacle unit at one end of the outlet which is substantially flush
15 with the top end of the receptacle unit.

36. A receptacle according to any one of claims 29 to 35 wherein the outlet does not extend into the receptacle unit.

20 37. A receptacle according to any one of claims 29 to 36 wherein the outlet is formed as a hole in the header unit which is in fluid communication with an outlet pathway in the header unit which connects to the exterior of the header unit.

25 38. A receptacle according to any one of claims 29 to 37 which is adapted to form a stable aerosol of the medicament in use.

39. A receptacle according to claim 38 which has a normally sealed outlet.

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40. A receptacle according to any one of claims 29 to 37 wherein the outlet is in fluid communication with an outlet pathway which connects to

the exterior of the header unit wherein the outlet pathway is provided with one or more outlet pathway chokes for decelerating the aerosol of the medicament

5 41. A receptacle according to claim 40 wherein the one or more outlet pathway chokes are one or more constrictions and/or one or more baffles.

42. A receptacle according to any one of claims 29 to 41 which is provided with a mouthpiece attached to the outlet.

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43. A receptacle according to any one of claims 29 to 41 wherein the outlet is provided with a tube for engaging with a breathing tube for a patient using a respirator.

15 44. A housing for a delivery device for a medicament having a first open-ended compartment which is adapted to receive a source of propellant and a clip which is adapted to receive a dispensing receptacle as defined in any one of claims 28 to 41 wherein the clip is associated with a propellant exit connector in fluid communication with the first
20 compartment which exit connector is arranged to engage with the entry connector of the dispensing receptacle.

45. A housing according to claim 44 wherein the fluid communication between the propellant exit connector and the first compartment is
25 provided by a propellant pathway which has at least one propellant pathway choke to decelerate the propellant.

46. A housing according to claim 45 wherein the propellant pathway choke is in the form of a constriction or a baffle.

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47. A kit comprising a source of propellant, a dispensing receptacle according to any one of claims 29 to 43 and a housing according to any

one of claims 44 to 46.

48. A method of dispensing a medicament as an aerosol to a patient in need of such treatment which method comprises the steps of:

- 5 providing a receptacle having an opening which receptacle contains the medicament in powder form;
 discharging a pressurised propellant from a canister or cartridge through a delivery tube extending into the receptacle and directed at the medicament so as to fluidise it;
- 10 forming an aerosol by transfer of energy from the propellant to the powder; and
 discharging the aerosol through an outlet passage provided at the opening of the receptacle.